

# Notice of Allowability

Application No.

10/017,677

Examiner

Peter Poltorak

Applicant(s)

LEVY, KENNETH L.

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Pre-Appeal Brief Conference request and communication with applicant on 1/24/08.
2. ☒ The allowed claim(s) is/are 1,3,4,9,10,12,13 and 21-26.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 1/24/08.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_



KAMBIZ ZAND  
SUPERVISORY PATENT EXAMINER

### **DETAILED ACTION**

This Office Action is in response to Pre-Appeal Brief Conference request and communication with applicant on 1/24/08.

#### ***Examiner Amendment***

An Examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the Issue Fee.

The following changes were authorized (and permission to make same by Authorization for this Examiner's Amendment was given in a telephone interview with Joel Meyer on 1/24/08).

Please replace the previous set of claims with the claims listed below:

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1. (Currently amended) A method of forensic digital watermarking comprising:
  - receiving a media content signal;
  - selecting an orientation for a forensic digital watermark to be embedded in the content signal, wherein the forensic digital watermark carries a message that identifies a receiver to robustly associate the content signal with the receiver, the orientation specifies a mapping of elements of the message to a pattern of samples in the media content signal, and the receiver selects the orientation from a set of allowed orientations that each map the elements of the message to a different pattern of samples of the content signal;
  - embedding the forensic digital watermark signal at the selected orientation in the content signal; wherein the embedding applies a different orientation for different instances of embedding the message by selecting a different orientation from the set of allowed orientations,

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different receivers have different forensic digital watermarks, and allowed sets of orientations are assigned to the different receivers to reduce interference between overlapping forensic digital watermarks embedded in the content signal by different receivers; wherein the orientation is randomly selected from the set of allowed orientations for each instance of embedding the digital watermark such that the orientation of the digital watermark varies for content signals processed in the receiver, the receiver embedding the forensic watermark into the content signals to robustly associate the content signals with the receiver; and wherein the orientation specifies a randomly selected pattern of spatial locations of the content signal.

2. (Cancelled)

3. (Currently amended) The method of claim [2] 1 wherein the orientation specifies a randomly selected pattern of time segments of the content signal.

4. (Currently amended) The method of claim [2] 1 wherein the orientation specifies a randomly selected pattern of frequency bands of the content signal.

5-8 (Cancelled)

9. (Previously Presented) The method of claim 1 including:  
attempting to detect a digital watermark in the content signal;  
and in response to detecting the digital watermark, embedding the forensic digital watermark at an orientation that does not interfere with the digital watermark.

10. (Currently amended) A method of forensic digital watermarking comprising:  
receiving a media content signal;  
attempting to detect a digital watermark in the content signal;  
in response to detecting the digital watermark, embedding a forensic digital watermark at an orientation that does not interfere with the digital watermark, including selecting an

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orientation for the forensic digital watermark signal to be embedded in the content signal based on the digital watermark;

embedding the forensic digital watermark signal at the selected orientation in the content signal; wherein the forensic digital watermark identifies a receiver to enable use of the forensic digital watermark to track the content signal to the receiver, different receivers have different forensic digital watermarks, and the orientation is selected so that the orientation varies for different receivers to reduce interference between overlapping forensic digital watermarks embedded in the content signal by different receivers; wherein the orientation is randomly selected from allowed sets of orientations associated with the different receivers; and wherein the orientation specifies a randomly selected pattern of spatial locations of the content signal.

11. (Cancelled)

12. (Currently amended) The method of claim [44] 10 wherein the orientation specifies a randomly selected pattern of time segments of the content signal.

13. (Currently amended) The method of claim [44] 10 wherein the orientation specifies a randomly selected pattern of frequency bands of the content signal.

14-20 (Cancelled)

21. (Previously presented) The method of claim 1 wherein the receiver selects the orientation as a function of a local variable in the receiver.

22. (Previously presented) The method of claim 21 wherein the local variable comprises time or data.

23. (Previously presented) The method of claim 21 wherein the local variable is input to a pseudo random function for selecting the orientation.

24. (Currently amended) A method of forensic digital watermarking comprising:  
receiving a media content signal;

generating an orientation for a forensic digital watermark to be embedded in the content signal, wherein the forensic digital watermark carriers a message that identifies a receiver to robustly associate the content signal with the receiver, the orientation specifies a mapping of elements of the message to a pattern of samples in the media content signal, and the receiver generates the orientation as function of a local variable in the receiver;

embedding the forensic digital watermark signal at the generated orientation in the content signal; wherein the embedding applies a different orientation for different instances of embedding the message by using the local variable to generate a different orientation, different receivers have different forensic digital watermarks, and different orientations are generated in the different receivers based on unique information associated with the different receivers to reduce interference between overlapping forensic digital watermarks embedded in the content signal by different receivers; wherein the unique information comprises embedder identifiers assigned to the different receivers and used to generate different patterns of samples to which the elements of the messages are mapped.

25. (Previously presented) The method of claim 24 wherein the local variable comprises time or data.

26. (Currently amended) The method of claim [21] 24 wherein the local variable is input to a pseudo random function for generating the orientation.

27. (Cancelled).

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**Allowance**

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In light of applicant arguments reviewed at the Pre-Appeal Conference on 1/22/08 as well as applicant authorized amendments, claims 1, 3-4, 9-10, 12-13 and 21-26 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on statement of Reasons for Allowance".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is (571) 272-3840. The examiner can normally be reached from Monday through Thursday from 9:00 until 5:00, and every other Friday from 9:00 until 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1600.

*John*  
1/25/08

  
KAMBIZ ZAND  
SUPERVISORY PATENT EXAMINER